

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING

## PCT

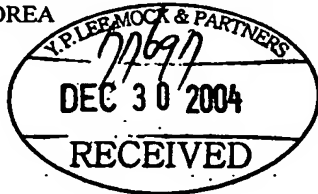
**WRITTEN OPINION**

(PCT Rule 66)

To:

LEE, Young-Pil

The Cheonghwa Bldg., 1571-18, Seocho-dong, Seocho-gu,  
Seoul 137-874, Republic of KOREA



Date of mailing  
(day/month/year) 24 DECEMBER 2004 (24.12.2004)

Applicant's or agent's file reference  
PH-20159-PCT

**REPLY DUE** within 1 months from  
the above date of mailing

International application No.

**PCT/KR2003/001966**

International filing date (day/month/year)

**26 SEPTEMBER 2003 (26.09.2003)**

Priority date(day/month/year)

**27 SEPTEMBER 2002 (27.09.2002)**

International Patent Classification (IPC) or both national classification and IPC

**IPC7 B22D 11/112**

Applicant

**POSTECH FOUNDATION et al**

1. This written opinion is the first (first,etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When ? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d)

How ? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3  
For the form and the language of the amendments, see Rules 66.8 and 66.9

Also For an additional opportunity to submit amendments, see Rule 66.4

For an examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis

For an informal communication with the examiner, see Rule 66.6

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 17 JANUARY 2005 (17.01.2005)

Name and mailing address of the IPEA/KR



Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon 302-701,  
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

NA, Dong Kyu

Telephone No. 82-42-481-5468



# WRITTEN OPINION

International application No.

PCT/KR2003/001966

## I. Basis of the opinion

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement) under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheet/fig \_\_\_\_\_

### 5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

# WRITTEN OPINION

International application No.

PCT/KR2003/001966

## V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-18	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-18	NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims		NO

### 2. Citations and explanations

인용문헌 1 : 일본 특허공개공보 54-161564호 (1979.12.21)

인용문헌 2 : 일본 특허공개공보 57-112954호 (1982.7.14)

본원의 청구항 제1항 내지 제6항은 서로 반대 방향으로 회전하는, 열교환 수단을 구비한 두개의 롤 사이에 용탕을 공급하여 냉각시킴으로써 비정질 합금판재를 제조하는 방법에 관한 것입니다. 청구항 제7항 내지 제16항은 용탕 출구를 구비한 도가니와 열교환 장치를 구비한 두개의 롤 그리고 도가니의 용탕 출구로부터 상기 롤까지 용탕이 공급되는 연결통로를 구비한 비정질 합금판재 제조장치에 관한 것입니다. 그리고 청구항 제17항은 청구항 제1항으로 제조된 벌크 비정질 합금을 청구하고 있고, 청구항 제18항은 청구항 제17항의 합금 중에서 특정의 수치로 두께를 한정된 비정질합금을 청구하고 있습니다.

상기 인용문헌 1은 용융금속을 공급하는 용융파이프의 노즐과 서로 반대방향으로 회전하는, 서로 다른 지름을 갖는 두개의 롤을 구비한 비정질재료 제조용 냉각롤 밀을 기재하고 있고, 인용문헌 2는 금속박막제조장치로 채용되는 롤의 구조를 내부 롤의 외부면과 롤 몸체의 위주 내면 사이에 냉각수를 공급하여 열교환하는 구조를 기재하고 있습니다.

본원의 청구항 제1 내지 제18항과 상기 인용문헌 1과 2를 비교해 볼 때, 비정질의 합금을 제조하기 위한 장치 및 방법으로 본원의 서로 다른 방향으로 회전하는 2개의 롤과 인용발명 1에서의 2개의 롤은 구성이 동일합니다. 본원에서의 열교환 방법 및 장치는 인용문헌 2의 열교환 구조와 롤에 형성한 구조는 상이하나 열교환 장치를 부가한다는 기술적 사상으로 볼 때 동일한 것입니다. 따라서 본원의 청구항 제1 내지 제16항은 당해 기술 분야에서 통상의 지식을 가진 자가 인용발명 1 및 2로부터 용이하게 발명할 수 있는 정도라고 판단됩니다. 청구항 제17항은 제1항으로 제조된 벌크 비정질 합금으로 진보성이 결여되어 있고, 청구항 제18항은 상기 청구항 제17항의 두께를 호적치로 한정 한 것으로 진보성이 결여되어 있다고 판단됩니다.

따라서 본원의 청구항 제1항 내지 제18항은 상기 인용문헌들로부터 용이하게 발명할 수 있는 것으로 이는 PCT조약 제33조 제3항에 위배됩니다. 끝.